2/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105353

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BETA PRIME POSITIVE SPECTRA AND THE GAMMA RAY SPECTRA IN COINCIDENCE WITH ANNIHILATION RADIATION WERE MEASURED WITH A 4 PI BETA PRIME POSITIVE GAMMA COINCIDENCE SPECTROMETER COMPRISING A 4 PI BETA DETECTOR (2 STILBENE CRYSTALS WITH PHOTOMULTIPLIERS) AND 3 GAMMA DETECTORS REGISTERING THE ANNIHILATION RADIATION AND GAMMA RAYS. PRIME146 EU, SEPD. RADIOCHEM. FROM THE GD FRACTION WITH ITS DAUGHTER PRODUCT PRIME146 EU, AND AN "OLD" SMAPLE OF THE EU FRACTION CONTG. PRIME148 EU, WERE USED AS SOURCES. THE MAX. ENERGY WAS 350 PLUS OR MINUS 30 KEV, INTENSITY 0.07 PLUS OR MINUS 0.02PERCENT PER DECAY, LOG FT EQUALS 7.2 FOR PRIME146 GD. TWO COMPONENTS OF 940 PLUS OR MINUS 40 AND 540 PLUS OR MINUS 30 KEV (LEADING TO THE LEVEL 1395 KEV) WERE FOUND FOR PRIME148 EU, THE INTENSITY OF THE 540 KEV COMPONENT WAS 0.06 PLUS OR MINUS 0.02PERCENT, WHICH LEADS TO LOG FT EQUALS 8.9. FACILITY: KIEV. GOS. UNIV. IM. SHEVCHENKO, KIEV, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--POSITRON DECAY OF GADOLINIUM-146, EUROPIUM-146, AND EUROPIUM-148
-U-

AUTHOR-(03)-AGEYEV, V.A., MITROKHOVICH, N.F., FEOKTISTOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 397-9

DATE PUBLISHED-------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--BETA SPECTRUM, GAMMA SPECTRUM, RADIOACTIVE DECAY, POSITRON, GADOLINIUM ISOTOPE, EUROPIUM ISOTOPE, PARTICLE ANNIHILATION, NUCLEAR ENERGY LEVEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0279 STEP NO--UR/0048/70/034/002/0397/0379

CIRC ACCESSION NO--AP0105353
UNCLASSIFIED

USSR

AGEYEV, V. A., et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No 8, Aug 70, pp 1614-1617

to the ratios of the intensities of the conversion lines to the intensities of γ-rays. The values of α_K for the transitions 350.1 and 352.1 were estimated. All transitions correspond to multipolarities M1 or E2. The exception was γ812.4, for which the internal conversion ratio was less than that established from Tc^{96} decay. The ground states are evaluated on the basis of the shell model.

2/2

Optics & Spectroscopy

USSR

AGEYEV, V. A., GAVRILYUK, V. I., KUPRYASHKIN, V. T., LATYSHEV, G. D., LYUTYY, I. N., MAYDANYUK, V. K., MAKOVETSKIY, Yu. V., and FEOKTISTOV, A. I., Institute of Physics of the Academy of Sciences UkrSSR

"Study of Conversion Electron Spectrum of Nb^{96}"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No 8, Aug 70, pp 1614-1617

Abstract: Individual segments of the conversion electron spectrum of Nb^{96} associated with the doublet structure of transitions found by Monaro and others are also possible according to the decay scheme of Nb^{96} are studied. The measurements were made on the magnetic β-spectrometer of the type πv2 of the Institute of Physics of the Academy of Sciences UkrSSR. The measurements showed K-line doublets of transitions in the regions 350, 720, and 810 kev and K241.3 is apparently a single line. The results of the measurements are given in a table. The energy of all transitions observed was determined with an error of ±0.3 kev. The K-lines of the transitions 350.1 and 352.1 kev were weak and therefore only an estimate of their intensity is given. For all transitions observed, α_K were determined with respect

AGEYEV, S. G. et al., Materialy XXIII Nauch.-tekhn. konferentsii Chelyabinsk. politekhn. in-ta Sekts. Avtotrakt. fak. i Fak. dvigateley, priborov i avtomatov, Chelyabinsk, 1970, p 118

through bubbles located in the liquid or introduced through the surface of the liquid. It is shown that at low frequencies (a few Hz to dozens of Hz), mass exchange in thin-walled vessels is determined chiefly by the system of vortexes formed in the liquid.

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USSR UDC: 532.72

AGEYEV, S. G., DOLGIKH, V. I., MOROZOV, I. I., NAKOZIN, V. N.

"Investigation of Mass Exchange Between a Gas and a Liquid in a Hermetically Sealed Vessel When it is Vertically Oscillated"

V sb. Materialy XXIII Nauch.-tekhn. konferentsii Chelyabinsk. politekhn. in-ta. Sekts. Avtotrakt. fak. i Fak. dvigateley, priborov i avtomatov (Materials of the Twenty-Third Scientific and Technical Conference of Chelyabinsk Polytechnical Institute. Section of the Tractor Department and the Department of Engines, Instruments and Automatic Facilities), Chelyabinsk, 1970, p 118 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7B831)

Translation: The paper is a report on the results of experiments on determining the parameters of mass exchange in a vertical cylindrical vessel. Various mechanisms of mass exchange are analyzed which can be realized in a liquid-gas system subjected to longitudinal vertical oscillations of various frequencies: mass exchange through the flat phase interface; and

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Foundry

A

UDC: 669.083.4.054

USSR

CHERNOV, B. G., FOMIN, N. V., and AGEYEV, F. Ya., Leningrad Polytechnic Institute

"Removal of Impurities of Nonferrous Metals From Melts in the Process of Vacuum Melting"

Moscow, Izvestiya Vyssikh Uchebnykh Zavedeniy - Chernaya Metallurgiya, No 8, 70, pp 23-24

Abstract: An attempt is described to reveal the factors controlling the removal rate of nonferrous metal impurities from iron and nickel-base melts in vacuum induction-type furnaces at a vacuum of 0.001--0.0001 mm Hg. The refining of the melt from nonferrous metals impurities, which is based on evaporation, comprises several stages: 1) convective transfer of impurities from the bulk of the melt toward the surface diffusion layer; 2) diffusion through this layer; 3) particle vaporization from the melt's surface, and 4) diffusion of evaporating particles in the melting chamber of the furnace. In a vacuum-type high-frequency induction furnace the forced agitation rate at 1600--1700°C attains 10--30 cm/sec. The problem posed here is reduced to studying the elementary acts of impurity transfer through the unmixed diffusion layer and the impurity evaporation from the surface. It is shown that the removal rate of nonferrous metal impurities is controlled by their vaporization intensity. A logarithmic formula has been derived describing the relation between the initial and current concentration of impurities in the melt and its holding time under vacuum.

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USSR UDC 669.187.2.083.4:621.365.2

CHERNOV, B. G., CHAN KHOA, and ACHYEV, P. Ya., Leningrad Polytechnic Institute imeni M. I. Kalinin

"Study of Processes of Removing Admixtures From Non-Ferrous Nickel Metals During Vacuum Smelting"

Moscow, Stal', No 4, Apr 73, pp 327-329

Abstract: An experimental investigation was made in 1-kg laboratory vacuum furnaces with induction heating and resistance heating, of the behavior of Pb, Bi, Sb, Cu, and Sn admixtures in Ni at temperatures in the 1500-1700°C interval and at a residual pressure of 10 mm Hg. The kinetic variation curves of the admixture content are practically linear, indicating that the process of removing admixtures from the melts follows the first [illegible] law. At temperatures where the process of vaporization of particles from the surface of the bath dominates over the diffusion through the thoroughly mixed surface layer of the liquid, the application of induction furnaces is recommended because the melt is intermixed more intensively than in electric resistance furnaces. Two figures, one table, two bibliographic references.

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USSR

GOSHIN, G. G., AGEYEV, O. I., Radiotekhnika i Elektronika, Vol 17, No 1, Jan 72, pp 7-14

proximation for calculating the components of the fields, the distribution of the current, and the energy flux. These formulas show in particular that the maximum energy flux is always directed along the surface of the cone. Numerical data are presented for a radially conducting plane. In this case the modulus and phase of the electric current density are calculated as well as the energy flux in the long-range zone in two mutually orthogonal planes. Three figures, bibliography of twelve titles.

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USSR UDC: 538.3

GOSHIN, G. G., AGEYEV O. I.

"Out-of-Phase Excitation of a Radially Conducting Cone"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 1, Jan 72, pp 7-14

Abstract: Excitation of a radially conducting conical surface by a ring of δ-oscillators is considered. The Kontorovich-Lebedev integral transforms are used to find a strict solution for the problem of out-of-phase excitation. It is shown that the spectrum of the excited waves consists of a circularly polarized TEM wave and a set of elliptically polarized TM waves. If the excitation is from sources located close to the vertex of the cone, then the amplitude of the TEM wave is considerably greater than the amplitudes of the TM waves. shifting the sources increases the amplitudes of the TM waves, and standing waves are set up between the vertex and the sources, leading to depolarization and frequency dependence of the fields. Simple formulas are derived in the TEM ap-

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2/2 016 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0108591

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE STABILITY OF INTERSTITIAL SOLID SOLUTIONS OF CAST MOLYBDENUM WITH POSSIBLE LARGE LATTICE CONSTANTS, AND MOLYBDENUM CONTAINING 0.014 C. THE SAMPLES WERE SUBJECTED TO HEAT TREATMENT IN THE CAST AND DEFORMED STATE. IT IS FOUND THAT THE INTERSTITIAL SOLID SOLUTIONS WHICH WERE NOT DECOMPOSED DURING COOLING OF THE INGOTS ARE QUITE STABLE. EVEN ADDITIONS OF METALS OF GROUP IVA DO NOT RESULT IN THEIR COMPLETE DECOMPOSITION.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--STABILITY OF INTERSTITIAL SOLID SOLUTIONS IN MOLYBDENUM -U-

AUTHOR-(03)-AGEYEV, N.V., YEGOSHINA, S.G., MODEL, M.S.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 189, FEB 11, 1970, P. 1155-1158

DATE PUBLISHED--11FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SOLID SOLUTION, MOLYBDENUM, BIBLIOGRAPHY, INTERSTITIAL NITRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0293 STEP NO--UR/0020/70/189/003/1155/1158

CIRC ACCESSION NO--AT0108591

UNCLASSIFIED

2/2 033 UNCLASSIFIED PROCESSING DATE--09OCT7(

CIRC ACCESSION NO--AT0108549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EQUIL. IN MO-ZR AND MO-TI ALLOYS WHEN HEATED IN A GAS MEDIUM CONTG. C AND OTHER IMPURITIES SOL. IN MO WHICH FORM SOLID SOLNS., IS DESTROYED. THIS IS DUE TO THE SUBSTITUTION OF ZR WHICH SEPS. COMPLETELY FROM THE ALLOY AND COLLECTS AS CARBIDES OR OXIDES ON THE SURFACE. SOLNS. OF LESS THAN OR EQUAL TO 15PERCENT TI AFFECT THE LATTICE PARAMETERS VERY LITTLE, BUT MO-ZR SOLID SOLNS. ARE DESTROYED COMPLETELY BY C AND O.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--INTERACTION OF MOLYBDENUM ZIRCONIUM AND MOLYBDENUM TITANIUM ALLOYS WITH CARBON AND OXYGEN CONTAINING GAS MEDIUM -U-

AUTHOR-(03)-AGEYEV, N.V., YEGOSHINA, S.G., MODEL, M.S.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970 190(6) 1345-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MOLYBDENUM ALLOY, ZIRCONIUM ALLOY, TITANIUM ALLOY, CARBON, OXYGEN, SOLID SOLUTION, CARBIDE, OXIDE, CRYSTAL LATTICE PARAMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0225 STEP NO--UR/0020/70/190/006/1345/1347

CIRC ACCESSION NO--AT0108549
UNCLASSIFIED

2/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0119918

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SHAPE AND DISTRIBUTION OF CARBIDE INCLUSIONS WAS STUDIED IN MO-C ALLOYS CONTG. 2 LEVELS OF C: (1) BELOW THE SATN. LIMIT IN MO AT THE EUTECTIC POINT (0.014-0.108 WT. PERCENT) AND (2) HIGHER THAN THE EUTECTIC CONCN. (0.05-0.07 WT. PERCENT). THESE ALLOYS WERE SOLIDFSOLIDIFIED ACCORDING TO 2 PROCEDURES AFTER MELTING: (A) WITH HIGH RATE OF CRYSTN., AND (B) AT A CONSIDERABLY SLOWER CRYSTN. RATE; MELTING WAS DONE IN AN ELECTRON BEAM. THIN SPECIMENS WERE PREPD. AND STUDIED BY ELECTRON MICROSCOPY. THE MO-C 0.05PERCENT ALLOY, WHEN CRYSTD. ACCORDING TO (A), SHOWED COLONIES OF DISTINCT EUTECTIC ORIGIN BETWEEN CRYSTALS OF SOLID SOLNS.; WHEN CRYSTD. ACCORDING TO (B) THE ALLOY SHOWED THE MO-C EUTECTIC WITH INCLUSIONS OF COARSE, IRREGULAR HEXAGONAL PRISMS OF MO SUB2 C. THE ALLOY MO-C WITH C CONCN. (0.014-0.018 WT. PERCENT), CRYSTD. ACCORDING TO (ALPHA), HAD A SOLID SOLN. STRONGLY SUPERSATD. WITH C WITHOUT ANY EUTECTIC. THE SAME ALLOY CRYSTD. ACCORDING TO PROCEDURE (B) HAD SOME EUTECTIC. BY CHANGING THE CRYSTN. CONDITIONS IT IS POSSIBLE TO CHANGE THE CHARACTER OF SOLID SOLN. DECOMPN. DURING SOLIDIFICATION. FACILITY: INST. MET. IM. BAIKOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--24OCT70

TITLE--ORIGIN OF CARBIDE INCLUSIONS IN MOLYBDENUM AND ITS ALLOY WITH CARBON -U-

AUTHOR-(04)-AGEYEV, N.V., IGNATOV, D.V., KANTOR, M.M., NALETOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(1), 89-91

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CARBIDE, MOLYBDENUM ALLOY, NONMETALLIC INCLUSION, ELECTRON MICROSCOPY, SOLID SOLUTION, EUTECTIC, METAL CRYSTALLIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1051 STEP NO--UR/0020/70/191/001/0089/0091

CIRC ACCESSION NO--AT0119918

UNCLASSIFIED

USSR

AGEYEV, N. V., Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

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USSR

AGEYEV, N. V., Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

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AGEYEV, N. V., Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

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USSR

AGEYEV, N. V., Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

USSR

AGEYEV, N. V., Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

they are compressed in plane and shaped blocks; problems of the plastic deformation of tungsten, molybdenum, and nickel-based alloys. This publication is intended for researchers, practical metallurgists, and metal scientists, process engineers, workers in ferrous and nonferrous metallurgical enterprises, instructors and students at metallurgical higher educational institutions, and for all specialists who study and use plastic metal deformation.

Table of Contents:

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UDC 621.7.04

USSR

AGEYEV, N. V., Academician ("editor"), Academy of Sciences USSR, Institute of Metallurgy imeni A. A. Baykov

Protsessy Formoizmeneniya Metallov i Splavov (Processes of Deformation of Metals and Alloys), Moscow, "Nauka," 1971, 206 pp

Translation of Annotation: This collection contains studies of plastic metal deformation of a theoretical and technological nature made by Corresponding Member of the Academy of Sciences USSR I. M. Pavlov, as well as by his closest associates working in this field. The general scientific results of I. M. Pavlov's recent studies are reflected in his articles on the dialectical method, the physical essence of mechanical and mathematical concepts, and the new concept of the processes of plastic deformation in vacuum.

I. M. Pavlov's theory of "rigid ends" was further developed in a number of recent studies. The appropriate articles contain new principles, rules, and data on the determination of the minimum length of ends in various cases of rolling. This collection also examines the effect of the chemical composition and conditions of deformation (the temperature, rate, and degree of deformation) on the mechanical properties of a number of metals and alloys; methodological problems connected with stress distribution in billets of various shapes when

USSR

UDC 669.295.5:539.376

AGEYEV, N. V., PETROVA, L. A., GREKOV, N. A., GRANKOVA, L. P., KOZLOVSKAYA, T. M., and ARKOVENKO, G. I., Moscow

"Creep of IVT-1, a β-Alloy of Titanium"

Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 163-167

Abstract: The creep of IVT-1, a β-alloy of titanium (7% Mo, 5.5% Cr, 3% Fe, 3% Al, remainder Ti) was determined at temperatures of 100, 200, 250, and 350°C at stresses of 120, 115, 110, 90, 80, and 75 kg/mm^2 over 1,000 hours and in some cases up to 2,500 hours. The limiting stress causing 0.02% residual deformation of the alloy after 1,000 hours is 105 kg/mm^2 at 200°C and 79 kg/mm^2 at 250°C. The rate of stable creep at these stresses and temperatures is $2 \cdot 10^{-5}$%/hr. The creep tests showed that if two specimens tested under identical conditions show different initial deformation, the specimen with greater initial deformation generally has lower creep than the specimen with less initial deformation. Total deformation increases little with increasing load time at 100-250°C and 120-75 kg/mm^2. Following creep tests, some breakup of β phase grains is observed; migration of grain boundaries and displacement along grain axes (slipping) were noted.

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USSR UDC: 539.385

AGEYEV, N.V., PETROVA, L.A., TERENT'YEV, V.F., GRANKOVA, L.P. and KOZLOVSKAYA, T.M., Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR

"Effect of Structure on the Cyclic Strength of 1VT1 Titanium Beta-Alloy"

Moscow, Sb. "Ustalost' metallov i splavov", "Nauka" Press, 1971, pp 70-73

Translation: The cyclic strength of 1VT1 titanium alloy (6.7% Mo, 4.99% Cr, 2.8% Fe, 3.1% Al) has been investigated under alternating loads following heat treatments under various conditions. The structure of the alloy was examined as a function of these conditions under both light and electron microscopes. The highest fatigue limit of 5.3 kg/mm^2 was exhibited by an alloy heat treated under the following specifications: hardening at 800C for 1 hr., water quenching, aging for 15 hrs. at 550C, and cooling in open air. The alloy treated under these conditions is characterized by homogeneous decay of the β-solid solution. (3 illustrations, 6 bibliographic references; summary).

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AGEYEV, N.V.

metallurgical chemistry

USSR UDC 669.295.5:539.376

AGEYEV, N. V., PETROVA, L. A., GREKOV, N. A., GRANKOVA, L. P., KOZLOVSKAYA, T. M., and ARKOVENKO, G. I., Moscow

"Creep of IVT-1, a β-Alloy of Titanium"

Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 163-167

Abstract: The creep of IVT-1, a β-alloy of titanium (7% Mo, 5.5% Cr, 3% Fe, 3% Al, remainder Ti) was determined at temperatures of 100, 200, 250, and 350°C at stresses of 120, 115, 110, 90, 80, and 75 kg/mm^2 over 1,000 hours and in some cases up to 2,500 hours. The limiting stress causing 0.02% residual deformation of the alloy after 1,000 hours is 105 kg/mm^2 at 200°C and 79 kg/mm^2 at 250°C. The rate of stable creep at these stresses and temperatures is $2 \cdot 10^{-5}$%/hr. The creep tests showed that if two specimens tested under identical conditions show different initial deformation, the specimen with greater initial deformation generally has lower creep than the specimen with less initial deformation. Total deformation increases little with increasing load time at 100-250°C and 120-75 kg/mm^2. Following creep tests, some breakup of β phase grains is observed; migration of grain boundaries and displacement along grain axes (slipping) were noted.

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USSR

AGEYEV, N. V. (Ed.). et al. Legirovaniye i svoystva zharoprochnykh splavov, Moscow, "Nauka" Press, 1971.

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USSR

AGEYEV, N. V. (Ed.). et al. Legirovaniye i svoystva zharoprochnykh splavov, Moscow, "Nauka" Press, 1971.

USSR

AGEYEV, N. V. (Ed.). et al. Legirovaniye i svoystva zharoprochnykh splavov, Moscow, "Nauka" Press, 1971.

Translation of Table of Contents:

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Mechanical Properties

USSR

UDC 669.017/018.45:66.046.5

AGEYEV, N. V., SAVITSKIY, Ye. M., KORNILOV, I. I., ZUDIN, I. F., PROKOF'YEV, D. I. (Editorial Board)

Legirovaniye i svoystva zharoprochnykh splavov (Alloying and Properties of High-Temperature Alloys), Collection of Papers, Moscow, "Nauka" Press, 1971, 208 p., illustrations, graphs, tables, 2500 copies printed.

Translation of Annotation:

This collection covers topical problems of the theory of heat resistance (mechanism of creep, hardening of solid solutions by alloying to produce stable dislocation structures, precipitation hardening, and the effect of the type, quantity, and pattern of excess phase distribution on the creep and failure of alloys). Some of the papers discuss problems related to the interaction of metallic materials with the environment (problems of protective coatings on high-temperature alloys, diffusion processes within these alloys). The collection is intended for researchers, design engineers, production personnel, metallurgists, and associates of establishments in power engineering and transportation machinery as well as in the aviation industry.

USSR

AGEYEV, N. V., Splavy Tsvetnykh Metallov, Moscow, Nauka, 1972, 248 pp

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AGEYEV, N. V., Splavy Tsvetnykh Metallov, Moscow, Nauka, 1972, 248 pp

III. Alloys and Their Properties

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USSR

AGEYEV, N. V., Splavy Tsvetnykh Metallov, Moscow, Nauka, 1972, 248 pp

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USSR
AGEYEV, N. V., Splavy Tsvetnykh Metallov, Moscow, Nauka, 1972, 248 pp

USSR

AGEYEV, N. V., Splavy Tsvetnykh Metallov, Moscow, Nauka, 1972, 248 pp

CONTENTS

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USSR

UDC 669.018+669.3/6

AGEYEV, N. V., Academician (Editor)

Splavy Tsvetnykh Metallov (Nonferrous Metal Alloys), Moscow, Nauka, 1972, 248 pp

Translation: This collection was published in honor of the 70th birthday of the great scientist and metallurgist, Academician A. A. Bochvar. The authors of the articles are known specialists in the field of physical metallurgy of nonferrous metal alloys -- colleagues, followers and students of A. A. Bochvar. The collection contains the results of many theoretical and experimental studies performed in recent years. A study is made of the problems of alloy theory and also the development of new materials with high mechanical and special physical properties for various fields of engineering. A broad class of problems dealing with the physical metallurgy of nonferrous metals is investigated in the collection.

The edition is of interest to specialists of the scientific research institutes and higher institutions of learning and also the engineering and technical workers of the industrial enterprises dealing with the development and application of alloys based on nonferrous metals.

The collection was prepared by the Metallurgy Institute imeni A. A. Baykov of the USSR Academy of Sciences jointly with the Moscow Institute of Steel and Alloys and the All-Union Institute of Light Alloys.

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USSR

AGEYEV, N. V. et al., Doklady Akademii Nauk SSSR, Vol 210, No 4, 1 Jun 73, pp 811-814

the composite was IVT1 alloy (Ti-7Mo-5.5Cr-3Fe-3Al) in 0.65 mm cold-rolled sheets. The two outside plates and the central plate were IVT1 alloy with alternating layers of titanium foil. After assembly of the stack, the edges were welded and rolling was done to 35% reduction at 1100°C. The resultant 2.7 mm plate was then cold-rolled to 2.3 mm. The plate was cut in the direction of rolling into specimens which were heat treated and studied for structure, microhardness of the layers and diffusion redistribution of the alloying elements between layers. The three-layer sandwich plates were made with α-titanium in the outer layers and an alloy similar to IVT1 in the center. The results of tests show that specimens made up of n layers of the same material are stronger than a monolithic plate of the same thickness. Greater strength can also be achieved by increasing the number of layers in a composite material.

USSR

AGEYEV, N. V., Academician, PETROVA, L. A., GRANOVA, L. P., MARKOV, A. M., Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences of the USSR, Moscow

"A Titanium-Based Composite Material"

Moscow, Doklady Akademii Nauk SSSR, Vol 210, No 4, 1 Jun 73, pp 811-814

Abstract: The paper describes a composite laminar material based on titanium made by hot-rolling in a vacuum. Five-layer and three-layer composites are studied to determine the force and temperature parameters and the feasibility of making a strong joint between layers. The plastic component for the five-layered composite was VT1 α-titanium foil 0.1 mm thick. It was assumed that a sheet built up from n layers of such foil would have greater resistance to brittle fracture than a monolithic sheet of titanium of the same thickness. The foil was etched in dilute hydrofluoric acid and washed in hot water with hydrogen peroxide added before rolling the sheet. A sheet 0.6 mm thick was then rolled from nine layers of foil, and two such sheets were rolled together to make a sheet about 1 mm thick, which was used in the composite. The strength material for

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USSR

AGEYEV, N. V., et al., Izvestiya Akademii Nauk SSSR, No 5, 1973, pp 150-159

this is due to the influence of developing phase transformations $\alpha \rightleftarrows \beta$ and the twinning in the alloy. Cross rolling of the not overheated ingot slab from 6 to 2 mm , in 11-22 passages, at 700°C, or at 800°C by non fractional rolling is considered the optimum rolling system. A perfect basal texture in annealed sheets of VT-5-1 alloy leads to a high hardening effect at two-axial loading. Recrystallization annealing is of little effect on the type of the texture. A deflected basal texture of the VT-14 alloy does not effect a texture hardening in annealed and in dispersion-hardened sheets. Four figures, one table, ten bibliographic references.

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USSR UDC 669.295.5:620.183

AGEYEV, N. V., BABAREKO, A. A., RUBINA, Ye. B., KHOREV, A. I., KRASNOZHON, A. I., and BETSOFEN, S. Ya., Moscow

"Effect of the Processing Technology on the Texture of Rolled Sheets of VT-5-1 and VT-14 Titanium Alloys"

Moscow, Izvestiya Akademii Nauk SSSR, No 5, 1973, pp 150-159

Abstract: The development of the texture of α-phase in sheets, 2 mm thick, of VT-5-1 alloy and $\alpha+\beta$-alloy VT-14 on rolling, depending on the reduction degree, the deformation, temperature, and the divisibility of rolling, was studied by the method of polar figures. The results are discussed by reference to the correlation of principal texture components and direct and reverse polar figures. The intensity of the basal plane texture in the α-phase VT-5-1 alloy grows monotonously with increasing reduction degree. In the $\alpha+\beta$ alloy VT-14, the basal texture changes not monotonously by changing deformation conditions;

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USSR

AGEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Moscow, 1973

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AGEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Moscow, 1973

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AGEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Moscow, 1973

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AGEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Moscow, 1973

HEAT- RESISTANT METALS AND COMPOSITE MATERIALS

USSR

ACEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Moscow, 1973

USSR

AGEYEV, N. V., et al., Structure and Properties of Heat-Resistant Metallic Materials, Mocow, 1973

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USSR

UDC 669.017/.018.45:620.18

AGEYEV, N. V., SAVITSKIY, YE. M., KORNILOV, I. I., ZUDIN, I. F., and PROKOF'YEV, D. I., Editors

Struktura i Svoystva Zharoprochnykh Metallicheskikh Materialov (Structure and Properties of Heat-Resistant Metallic Materials), Moscow, "Nauka," 1973, 262 pp

Translation: Results are generalized from studies associated with the physical criteria of heat resistance; the role of the electron structure of alloys; the principles of alloy and dispersion hardening of alloys; the physico-chemical basis for developing composite materials; dislocation mechanisms of failure and deformation; the development of alloys on the basis of Fe, Ni, Mo, Nb, and other refractory elements; ways of increasing the heat resistance of alloys and others. This publication is intended for researchers, metallurgists, metals experts, the designers of the power, aviation, and machine-building industries and for other specialists.

CONTENTS

2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140287

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 120-200DEGREES, OXIDN. OF C SUB4 CL SUB6 PROCEEDS BY CHAIN MECHANISM SHOWING A RATE MAX. AT 170DEGREES. APPARENT ACTIVATION ENERGY AT THE OPTIMAL CONDITONS IS 20.6 KCAL-MOLE. REACTION PRODUCTS INHIBIT OXIDN. RATE AT HIGHER THAN 50PERCENT C SUB2 CL SUB6 CONVERSION. PI ELECTRON D., BOND ORDERS, AND INDEXES OF FREE VALENCE OF C SUB4 CL SUB6 ARE CALCD. BY LCAO MO AND ARE TABULATED. THE CALCN. INDICATES THAT CHLORINATED ETHYLENES ARE MORE REACTIVE THAN C SUB4 CL SUB6. FACILITY: FIZ.-KHIM. INST. IM. KARPOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--KINETICS AND MECHANISM OF HEXACHLOROBUTADIENE OXIDATION -U-

AUTHOR-(02)-POLUEKTOV, V.A., AGEYEV, N.G.

COUNTRY OF INFO--USSR

SOURCE--KINET. KATAL. 1970, 11(3), 588-94

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REACTION KINETICS, CHAIN REACTION, BUTADIENE, CHLORINATED ORGANIC COMPOUND, ACTIVATION ENERGY, OXIDATION, ETHYLENE, ELECTRON DENSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/D03 STEP NO--UR/0195/70/011/003/0588/0594

CIRC ACCESSION NO--AP0140287

UNCLASSIFIED

UDC 669.172

USSR

SAVITSKIY, Ye. M., BURKHANOV, G. S., and AGEYEV, M. N.

"Effect of High-Temperature Hardening on Substructure and Ductility of Tungsten Single Crystals"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 135-139

Translation: The effect of high-temperature, high-speed hardening on the fine structure and plastic properties of tungsten single crystals is studied. 4 Figures; 3 Bibliographic References.

1/1

USSR

UDC: None

AGEYEV, N. D.

"On Error Equations For Optimization of a Gyroscopic Navigation System"

Moscow, Mekhanika Tverdogo Tela, No 2, Mar/Apr 70, pp 39-43

Abstract: Expressions are derived for obtaining optimized signals from an accelerometer-gyroscope navigation system, in which the accelerometers generate the useful output. A horizontally stabilized gyro platform is assumed, with the accelerometers fixed to it. The sensing axes of the gyro and accelerometers are assumed to lie in one mutually orthogonal set of coordinates. Linear expressions for gyro vertical and azimuth motions are derived, together with expressions for net gyrocompass error. After considering a general case, the author derives variant expressions for the case of intermittent gyroscope usage, e.g. for short intervals of a day rather than continuously. Theoretical error inputs from all assumed factors are treated. Optimum operational parameters can then be found from the derived expressions by the method of successive approximations. In general, synthesis of the type of system in question reduces to the task of arriving at optimal filter characteristics.

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USSR UDC 621.771.23.011

VYDRIN, V. N., TUMARKIN, V. YA., and AGEYEV, L. M., Chelyabinsk Polytechnical Institute

"Experimental Investigation of Contact Stress During Rolling of Thick Strips. Report 1"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 2, 1970, pp 75-78

Abstract: The article describes the results of investigations of contact stresses during rolling of thick strips carried out with the help of a roll torquemeter. Identical measuring devices are placed into both rolls. Characteristic curves of contact stresses are presented and analyzed. The shape of curves of adhacent stresses depends on the kinematics of metal flow in relation to the contact surface and is related to the dependence of mechanical properties of the cited metal on the degree and rate of deformation. The obtained curves of normal stresses substantiate and expound the current explanation concerning their dependence on parameters, which characterize the form of deformation area, and are in full agreement with the curves of friction forces.

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USSR

VYDRIN, V. N., and ACEYEV, L. M., Stal', Vol 31, No 4, Apr 71, pp 334-336

considerably reduced vs. that in ordinary rolling, so that the danger of fracture during passage of the seam through the rollers is lessened.

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USSR

VYDRIN, V. N., and AGEYEV, L. M., Chelyabinsk Polytechnical Institute

"A New Technical Process for the Rolling of Sheets and Bands"

Moscow, Stal', Vol 31, No 4, Apr 71, pp 334-336

Abstract: A new process of rolling combined with drawing has been developed (cf. Author's Certificate No 225829, Byulleten' Izobreteniy, No 28, 1968) in which the sheet or band being treated envelops the two rollers. A tension is applied to both ends of the metal strip and the ratio of peripheral velocities of the rollers is made equal to the degree of drawing. A study showed that in the production of cold-rolled sheets and bands by the new method the pressure of the metal on the rollers and the power expended are reduced considerably. Application of the new process lowers the relative differences in thickness longitudinally, improves the stability of geometric dimensions of sheets, increases the production efficiency, and lowers production costs. Furthermore, automatic control is simplified and the stability of rollers increased. Application of the new process opens up possibilities for the cold rolling and very thin cold rolling of sheets and bands from super-strength steels and alloys. Experiments showed that in the rolling of welded bands by the new method the pressure differential in the welded seam is

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USSR

UDC 620.1:531.782(088.8)

VYDRIN, V. N., AGEYEV, L. M., TISHCHENKO, O. I., SHOLIN, A. P.

"Cam Plastometer"

USSR Author's Certificate No 265518, Filed 26 Oct 68, Published 10 Jul 70 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4I959)

Translation: The invention pertains to techniques and equipment for studying the properties of metals and alloys under various thermomechanical strain conditions. The proposed cam plastometer differs from the known ones by the fact that an additional control cam is rigidly attached to the flywheel. The additional cam is phase-shifted with respect to the operating cam and interacts with the rack and pinion inclusion mechanism on the pinion shaft of which a cam is rigidly attached with a stud which closes the kinematic loading circuit. Stability of inclusion of the kinematic loading circuit in a broad range of deformation rates of the tested sample is insured with this execution of the device.

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USSR

UDC 378.121

AGEYEV, D. V., GLEBOVICH, G. V., LEZIN, YU. S., MALANOV, V. V., MORUGIN, L. A., SMORGONSKIY, V. YA.

"Gor'kiy Polytechnic Institute"

Kiev, Izvestiya vysshikh uchebnykh zavedeniy--Radioelektronika, Vol XIV, No 8, 1971, pp 954-960

Abstract: A review of the scientific research work performed by the radio engineering department of Gor'kiy Polytechnic Institute is presented. Abstracts and bibliographic listings of many of the papers published by members of the radio engineering faculty are presented. The fields of study covered include improving the noise immunity of radio technical systems, the theory of pulse-duration modulation and pulse amplification of low-frequency electrical oscillations, improvement of the speed of pulse devices, automatic phase control and wave guide theory, and utilization of the research results in the training process. Specific lecture courses at the university in which the scientific research papers are used are listed.

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USSR UDC 621.316.1.017.2.001.24:681.3

LEDYANKIN, L. P., AGEYEV, A. I., PRAKHIN, B. YA., RYZHOV, O. I.

"Calculating Electric Power Losses in High-Voltage Municipal Networks on the Ural-2 Computer"

V sb. Tekhn. progress v elektrosnabzh. gorodov (Technical Progress in Electric Power Supply of the Cities -- collection of works), Leningrad, Energiya Press, 1970, pp 20-23 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye 285)

Translation: A method and algorithm for a program to calculate the electric power losses in the open high-voltage municipal networks on the Ural-2 digital computer are described. The electric power losses are determined by the load charts taken for groups of consumers with the same type of load. Calculations were performed by means of this program for the Ivanovo Underground Municipal Network. The calculations make it possible to offer recommendations for reduction of electric power losses. There is 1 illustration and a 2-entry bibliography.

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USSR

UDC: 616-006.092.9-097.3

BABAKOVA, S.V., DODONOVA, N.N., TSETLIN, YE.M., GORODILOVA, V.V., AGAMIROV, A.I., and ALTSHTEYN, A.D., Laboratory of Virology, Moscow Scientific Research Institute of Oncology imeni P. A. Herzen and Laboratory of Enterovirus and Adenovirus Preparations, State Control Institute of Medical Biological Preparations imeni L. A. Tarasevich.

"Induction of Specific Antitumor Immunity in Hamsters with Green Monkey Adenovirus SA7(C8)."

Leningrad, Voprosy Oncologii, Vol 16, No 3, 1970, pp 40-46

Abstract: Strain SA7(C8) of green monkey adenovirus, highly oncogenic for hamsters, and its large-plaque and small-plaque variants, can induce specific antitumor immunity in adult hamsters. Large-plaque and small-plaque variants of virus SA7(C8) do not differ in their capacity to induce antitumor immunity. A high dose of virus SA7(C8), more than 10^5 TCD_{50}, is required to induce antitumor immunity. Immunity developed during the first week after inoculation of the virus. Cells of transplanted tumor lines regularly contain specific transplantation antigen. In cells of primary tumors induced by adenovirus SA7(C8), transplantation antigen could be found in only some cases.

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AGEKYAN, T.A.

Stars, Galaxies etc.

New Books

JPRS 52887
15 April 1971

("Nauka" Publishing House)

Physical, Mathematical and Technical Sciences

T. A. Agekyan. Zvezdy, galaktiki, metagalaktiki (Stars, Galixies, and Metagalaxies). Moscow, 1970, 334 pages with ill., 21,000 copies, 88 k.

[illegible] operatsiy proyektirovaniya protsessov mashinostroyeniya (Automation of Operations in the Planning of Machine-Building Processes). Collection of Articles. Institute of Machine-Building. Moscow, 1970, 192 pages, 2800 copies, 73. k

Voprosy optimal'nogo razvitiya energosistem i novyye tekhnicheskiya sredsta ikh zashcity (Questions in the Optimal Development of Power Systems and New Technical Means of Their Protection). Collection of Articles. Power Engineering Institute imeni G.M. Krzhizhanovskiy. Moscow, 1970, 158 pages, 1300 copies, 63 k.

G. M. Gershteyn. Modelirovaniya poley metodom electrostaticheskoy induktsii (navedennogo toka) (Modelling of Fields by the Method of Electrostatic Industion (Induced Current) Moscow, 1970, 316 pages, 5000 copies, 1 r 40 k.

V. L. Gruzov and G.I. Novikov. Elektromagnetnyee protsessy v invertorakh na polñost'yu upravlyayemykh ventilakh (Electromagenetic Process in Invertors on Completely Controllable Valves). Leningrad, 1970, 100 pages, 1200 copies, 60 k.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R002065900034-6

2/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105137

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEINEKE-MIKULICZ PYLOROPLASTY ASSOCIATED WITH BILATERAL TRUNK OR SELECTIVE VAGOTOMY WAS ACCOMPLISHED IN 62 PATIENTS WITH DUODENAL ULCERS. FOURTY EIGHT PATIENTS WERE OPERATED UPON ON URGENT INDICATIONS FOR PERFORATION OR PROFUSE HEMORRHAGE FROM DUODENAL ULCERS. LIGATION OF THE BLEEDING VESSEL WITH PYLOROPLASTY AND VAGOTOMY IS BELIEVED TO BE ADVANTAGEOUS IS SURGERY OF PROFUSE HEMORRHAGES, WHEN THE ROUTINE GASTRECTOMY YIELDS STILL GREAT PER CENT OF THE POSTOPERATIVE MORTALITY. DISSECTION OF A PERFORATING DUODENAL ULCER, PERFORMED IN 38 PATIENTS, IS CONSIDERED TO BE MORE RADICAL THAN SIMPLE SUTURING OF THE ULCER. THE FORMER IS MORE FEASIBLE TECHNICALLY THAN GASTRECTOMY. IN VAST MAJORITY OF PATIENTS PYLOROPLASTY AND VAGOTOMY RESULTED IN RELIABLE INHIBITION OF THE GASTRIC SECRETION. AMONG 62 PATIENTS THERE WERE TWO DEATHS DUE TO CAUSES NOT RELATIVE TO SURGICAL INTERVENTION. IN THE REMAINDER GOOD IMMEDIATE RESULTS WERE OBTAINED. TWENTY SIX PATIENTS WERE INVESTIGATED CLINICALLY WITHIN THE TERMS FROM 3 MONTHS TO 1.5 YEARS, NO ULCER RECURRENCE WAS NOTED. SLIGHT DIARRHEA WAS OBSERVED IN 2 CASES. NO MARKED DUMPING SYNDROME PHENOMENA WERE OBSERVED.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--VAGOTOMY AND PYLOROPLASTY IN SURGERY OF DUODENAL ULCERS -U-

AUTHOR-(04)-PANTSYREV, U.M., GRINBERG, A.A., MINTS, V.YA., AGEYCHEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 4, PP 74-79

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DUODENUM, SURGERY, CRANIAL NERVE, LESION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0038 STEP NO--UR/0589/70/104/004/0074/0079

CIRC ACCESSION NO--AP0105137

UNCLASSIFIED

USSR UDC: 621.315.5.3

AGEKYAN, V. T., et al, Fizika i tekhnika poluprovodnikov, No 10, 1972, pp 1924-1930

experiment -- a plot of the positions of absorption maxima in the SnO_2 spectrum as a function of the magnetic field intensity.

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USSR UDC: 62[illegible].315.592

AGEKYAN, V. T., ZAKHARCHENYA, B. P., IL'IN, V. V., [illegible], R. P., STEPANOV, Yu. A., and SHIRYAPOV, I. P.

"Exciton Magnetic Absorption in SnO_2 Monocrystals"

Leningrad, Fizika i tekhnika poluprovodnikov, No [illegible], [illegible], pp 192[illegible]-1930

Abstract: This article is in the nature of a [illegible] of experimental work on the absorption spectra of [illegible] in a magnetic field, with the accent on prior [illegible] published by the authors named above. Recent experiments in [illegible] examination of germanium testifying to the exciton origin [illegible] absorption oscillations are cited. The authors of the present paper, however, [illegible] a number of reasons for [illegible] experimentation for a magnetic field of more than [illegible] that it [illegible] suited for clarifying the [illegible] interaction in magnetic absorption oscillation [illegible] to an experiment described in an earlier paper they published (Agekyan, V. T., et al, [illegible], 2, 182, 1972), [illegible] magnet, a liquid helium cryostat, an ISSh-500 [illegible], and a DFS-8 spectrograph, they reproduce the basic result of that

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USSR

UDC: [illegible]

AGEKYAN, V. T., STEPANOV, Yu. A., and [illegible]

"Analysis of the SnO_2 Exciton Absorption [illegible]"

Leningrad, Fizika i tekhnika poluprovodnikov, V. 10, [illegible] 1973, pp 1[illegible] 1935

Abstract: This article is in the nature of a [illegible] work that has been done in the area of SnO_2 exciton [illegible]. The method of perturbation theory has been used to [illegible] tions to exciton energy levels that [illegible] the specimen crystal is taken into account. [illegible] energy levels in the first approximation is [illegible] spectrum, [illegible] series of exciton lines with [illegible] than 1 cm^{-1} are observed at a temperature of [illegible] is classified as direct, forbidden exciton [illegible] n^P states and quadrupole 1S state. [illegible] theoretical and experimental results on [illegible] surveyed [illegible], and a table of [illegible] obtained through both theory and [illegible] liography of [illegible] is appended.
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USSR A UDC: 61...

AGDZHANYAN, N.A., and SERGIYENKO, A.V., Institute of Medical and Biological Problems, Moscow

"Endurance of Acute Hypoxia After Various Periods in a Medium With a High Carbon-Dioxide Content"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 2, May 70, pp 487-489

Abstract: Male rats were kept in a chamber atmosphere containing 6% CO_2. The endurance test, conducted daily for 7 days, and then for 6 days in normal atmosphere, consisted of the survival time of animals at simulated altitudes of 12,000 m. The survival time for controls averaged 13 minutes and 45 seconds (100%). For the CO_2 animals, the survival time at the end of the 1st day was 23 min, 42 sec (173%), for the 2nd day, 133%, the 3rd day, 137%, and the 4th day, 155%. After the 4th day, respiratory, cardiac and metabolic disturbances began to appear. On the 6th and 7th days, endurance decreased to 43-36%, with bradycardia, convulsions, disrupped temperature reactions, extracystoles, inversion of EKG waves, etc. After reversion to normal atmosphere, the endurance was still low, but gradually improved, and became almost normal on the sixth day. Results show that the endurance of acute hypoxia depends not only upon the CO_2 content, but also on the period of stay in the artificial atmosphere.

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2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128750

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BA SALT OF A CONDENSATION PRODUCT OF AN ALKYLPHENOL WITH HCHO IS USED AS AN ANTISMOKE ADDITIVE FOR DIESEL FUEL. FACILITY: INSTITUT KHIMII PRISADOK AN AZERBAYDZHANSKOY SSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ANTISMOKE ADDITIVES FOR DIESEL FUEL -U-

AUTHOR-(05)-KULIYEV, A.M., ALIYEV, Z.E., AGAYEVA, S.M., SHAKHGELDIYEV, M.A., VARSHAVSKIY, I.L.

COUNTRY OF INFO--USSR

A

SOURCE--U.S.S.R. 264,843

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--03MAR70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--FUEL ADDITIVE, DIESEL FUEL, CHEMICAL PATENT, PHENOL, FORMALDEHYDE, CONDENSATION REACTION, ANTISMOKING PROGRAM, ORGANOBARIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1343 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128750

UNCLASSIFIED

USSR

UDC 662.753.002.3

ALIYEV, Z. E., AGAYEVA, S. M., and BILALOV, S. D.

"Influence of Cycloalkyl Derivatives of Diatomic Phenols and Their Esters on Formation of Sediments in Fuels"

Prisadki k smazochn. maslam, (Additives for Lubricating Oils), No 2, pp 245-249, Baku, 1969 (from Referativnyy Zhurnal Khimiya, No 3, Vol 2, 10 Feb 70, Abstract No 3 P212)

Translation: The influence of certain cycloalkyl derivatives of diatomic phenols and their esters on the formation of insoluble organic sediments in T-1 and diesel summer fuels was studied. It was shown that of the compounds investigated, the most effective stabilizers under moderate temperature conditions for oxidation of fuels are cyclophexyl pyrocatechin and cyclohexyl resorcinol, which decrease the formation of insoluble sediments in summer diesel fuel by 84-88%. Under high oxidation temperature conditions, cyclohexyl pyrocatechin is an effective stabilizer for T-1 fuel (decreasing formation of insoluble sediments by 48-57%).

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Author's conclusions

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USSR UDC 621.892.86.099.6

ALIYEV, Z. E., AGAYEVA, S. M., and BILALOV, S. B.

"Synthesis of Cycloalkyl Derivatives of Diatomic Phenols and Their Esters"

Prisadki k smazochn. maslam. (Additives for Lubricating Oils), No 2, pp 118-122, 1969, (from Referativnyy Zhurnal Khimiya, No 3, Vol 2, 10 Feb 70, Abstract No 3 P234)

Translation: Synthesized compounds are suggested as antioxidizing additives, particularly 2, 5-di-(cyclohexyl)- and 2,5-di-(methyl cyclohexyl)-hydroquinones (m. p. 210-211.5° and 167-168° resp.), cyclohexyl pyrocatechin (I), cyclohexyl resorcinol, methyl esters of cyclohexyl hydroquinone and I (b.p. 145-150°/3 mm, 215-218°/20 mm, 150-155°/3 mm, and 145-148°/20 mm respectively). The IR-spectra of 4 dialkylcyclohexylhydroquinones are presented.

L. I. Berlin

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USSR UDC 621.357.7.035.4:669.738.7(088.8)

AZHOGIN, F. F., LOGACHEVA, Z. V., PRIBYLOVA, L. I., VLASOVA, L. P., and AGEYEVA, N. I.

"An Electrolyte for Cadmium Plating"

Author's Certificate No 346390, filed 10 Sep 70, published 22 Aug 72 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L307P)

Translation: An ammonium chloride electrolyte is patented for cadmium plating. It is improved in that in order to prevent the hydrogenation of the base metal, ethylene glycol is added, resulting in the following composition, in g/liter: $CdCl_2$,40-50; NH_4Cl,230-280; ethylene glycol,30-40, carpenter's glue,1-2; an optimum pH of the electrolyte of 2.5-3.5; D_k less than 2 amps/decimeter^2, and a theoretical yield of 100%. For example, samples from the steel EI-643 having a notch r=0.1 mm is plated with cadmium in our electrolyte having the following composition, in g/liter: $CdSO_4$,50; NH_4Cl,250; ethylene glycol, 30; carpenters glue, 2; at pH of 3.0 and a D_k 2 amps/decimeter^2 for a thickness of 10 microns. Without subsequent heating at a tension equal to 90% of the strength of the notched sample (the Stress equals 216 kg/mm^2), the plated sample did not fracture after 200 hours.

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PHYSICS
Crystals & Semiconductors

USSR

UDC 621.315.592

ABDULLAYEV, G. B., AKHUNDOV, G. A., AGAYEVA, A. A., SALMANOV, V. M., and YAROSHETSKIY, I. D. -- Azerbaydzhan State University imeni S. M. Kirov, Baku, and Physical-Technical Institute imeni A. F. Ioffe, USSR Academy of Sciences, Leningrad

"Recombination Radiation in Solid Solutions Under Neodymium Laser Excitation"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 7, No 6, Jun 73, pp 1108 - 1110

Abstract: The studies were made with GaS_xSe_{1-x}, where x was varied from 0.05 to 0.80. The crystals were grown by slow cooling with a constant temperature gradient; plane parallel sheets were then peeled off for testing at T = 77°K. It was found that the two primary spectral bands, caused by the decay of free excitons with the release of 1 and 2 optical phonons respectively, were displaced smoothly with change in the crystal composition. Increasing the pumping power narrowed the bands and sharply increased intensity at the maxima (by a factor of W^n, where W is the pumping power and n varied from 4 to 7). The data indicates the availability of laser radiation from these crystals over a range from 4850 angstroms to 6000 angstroms.

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2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137193

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REDN. OF THE INCUBATION TEMP. OF POLIOVIRUS INFECTED HELA CELLS TO 23DEGREES INHIBITED CELLULAR RNA SYNTHESIS BY NEARLY 90PERCENT. THE SYNTHESIS OF HIGH MOL. WT. RNA WAS MORE SENSITIVE TO LOW TEMP. THAN WAS THE SYNTHESIS OF LOW MOL. WT. RNA. HOWEVER, THE RNA SYNTHESIZED AT 23DEGREES POSSESSED TEMPLATE ACTIVITY AND THE PROTEINS PRODUCED AT LOW TEMP. WERE ABLE TO PARTICIPATE IN RNA SYNTHESIS. SOME OF THE PROTEINS FORMED AT 23DEGREES REACTED WITH POLIOVIRUS ANTISERUM IN IMMUNOFLUORESCENCE TESTS, BUT ANTISERUM TO THE LOW TEMP. PROTEINS DID NOT NEUTRALIZE MATURE VIRUS PARTICLES. RNA POLYMERASE INDUCED BY VIRUS IN CELLS AT 36DEGREES WAS CAPABLE OF FUNCTIONING AT 23DEGREES. THE RESULTS INDICATED THAT AT 23DEGREES THE VIRUS PENETRATED THE CELL AND WAS DEPROTEINIZED, BUT TRANSLATION OF THE VIRUS GENOME WAS RETARDED. FACILITY: MOSCOW RES. INST. VIRUS PREP., MOSCOW, USSR.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SYNTHESIS OF CELLULAR AND VIRAL MACROMOLECULES UNDER CONDITIONS OF SUBOPTIMAL TEMPERATURE -U-

AUTHOR-(02)-GENDON, YU.Z., AGEEVA, O.N.

A

COUNTRY OF INFO--USSR

SOURCE--ARCH. GESAMTE VIRUSFORSCH. 1970, 30(1), 7-15

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, POLIOMYELITIS VIRUS, RNA, BIOSYNTHESIS, LOW TEMPERATURE EFFECT, IMMUNOFLUORESCENCE, MACROMOLECULE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/2018 STEP NO--AU/0000/70/030/001/0007/0015

CIRC ACCESSION NO--AP0137193

UNCLASSIFIED

USSR

AGAYEV, Yu. M., and SEIDOVA, R. A., Doklady Akademii Nauk Azerbaydzhanskoy SSR, Vol 27, No 4, 1971, pp 59-64

microspores were encountered, with the latter consisting of as many as 10-12 microspores in some cases. Upon exposure of the seeds to the effect of an electric field, formation of monads, diads, triads, or polyads did not take place; there were only disturbances in the course of the meiosis itself. Upon irradiation with gamma-rays, the percentage of microspores with disturbances of meiosis increased with the radiation dose in the 0.5-20 kr range and then decreased upon the increase of the radiation dose from 20 to 40 kr. The final decrease agreed with data obtained in the study of somatic cells. The ratio of non-tetrad microspores was zero upon irradiation with 0.5 kr (i.e., 100% of them formed tetrads) and varied in the 0-11.06% range on irradiation in the total dosage range applied. Exposure to the electric field resulted in a considerably smaller number of changes in the course of meiosis than irradiation. The number of tetrad microspores that formed in the tetrad stage was 100% for both varieties irrespective of the length of exposure to the electric field.

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USSR UDC 576.354

AGAYEV, Yu. M., and SEIDOVA, R. A., Institute of Genetics and Selection, Academy of Sciences Azerbaydzhan SSR

"Disturbances of Meiosis in Cotton Plants Under the Effect of Some Physical Factors"

Baku, Doklady Akademii Nauk Azerbaydzhanskoy SSR, Vol 27, No 4, 1971, pp 59-64

Abstract: A study was made of the course of meiosis in young anthers of cotton plants of varieties 108 F and 2421 grown from seeds which had been subjected to gamma-irradiation in doses of 0.5, 1, 10, 20, 40, and 60 kr at a dose rate of 0.7 kr/sec or to the effect of an electric field varied by unipolar pulses at frequencies of 40-50 cycles, having an intensity of 2500 v, and applied for 15, 30, 60, or 120 sec. In the study of meiosis, the distinctness of outline and location of buds was considered. A study of microsporogenesis indicated that various disturbances in meiosis and in the formation of microspores took place as a result of irradiation with doses in the 1-40 kr range. The dose of 60 kr was lethal for both varieties; its action led to death of the plants in the budding stage. In the course of meiosis uni-, tri-, quadri-, and hexavalency in diakinesis, bridging in anaphase I, fragmentation of chromosomes and laggs in anaphases I and II, and other disturbances were observed. Monads, triads, and polyads of

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USSR UDC 621.382.2:(546.181):546.681

GLAZKOV, O., SLOBODCHIKOV, S., AGAYEV, Ya., Physicotechnical Institute, Academy of Sciences of the Turkmen SSR

"Electrical Properties of PN Junctions in n-Gallium Phosphide"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Fiziko-Tekhnicheskikh, Khimicheskikh i Geologicheskikh Nauk, No 6, 1971, pp 3-8

Abstract: The paper presents some results of an investigation of the electrical properties of pn junctions based on gallium phosphide grown by the gas-transport reaction method. n-Type GaP was used with carrier concentrations of ~10^{15} and 10^{17}/cc at T = 296°K. The acceptor dopant was zinc and ohmic contacts were made by using indium on the n-side and In + (1-4)% Zn on the p-side. The current-voltage characteristics of these diodes were studied at 78-300°K. Mechanisms of current transmission are analyzed, and it is shown that a complete description of the forsard branch necessitates accounting for the diffusion and generation-recombination currents. The coefficient ß increases at low temperatures due to the tunnel effect. Excellent agreement is observed between the calculated and experimentally determined contact potential difference.
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USSR

UDC 621.315.592

AGAYEV, Ya., MIRGALOVSKAYA, M. S., MIKHAYLOV, A. R., STREL'NIKOVA, I. A., Physicotechnical Institute, Academy of Sciences of the Turkmen SSR

"Electrical Properties of p-Aluminum Antimonide Single Crystals"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Fiziko-Tekhnicheskikh, Khimicheskikh i Geologicheskikh Nauk, No 6, 1971, pp 9-14

Abstract: The authors studied the electrical properties of p-aluminum antimonide single crystals grown by the Czochralski method. The material was synthesized and the crystals were pulled in the same installation in a helium atmosphere. The specimens cut from the ingots measured approximately 2-2.5 x 3-4 x 12 mm. Platinum or molybdenum probe-leads were attached by spark-discharge welding. The wire leads were 0.05 mm in diameter. The electrical conductivity and Hall effect were measured by the compensation method, using direct current, at temperatures of 80-1300°K. The carrier (hole) concentration of the specimens was $4.6 \cdot 10^{17}$ - $2 \cdot 10^{18}$/cc. No inversion in the sign of the Hall coefficient was observed throughout the entire temperature range. The width of the forbidden band was found to be 1.61 eV in the region of intrinsic conductivity, and the acceptor level was found to be approximately 0.02 eV in the region of extrinsic conductivity.

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USSR

PETROV, B. N., PETROV, V. V., ULANOV, G. M., AGEYEV, V. M., ZAPOROZHETS, A. V., USKOV, A. S., KOCHUBIEVSKIY, I. D.

"Origin of the Information Theory of Control"

Tr. IV Vses. Soveshch. po Avtomat. upr., 1968. Teoriya Avtomat. upr. [Works of Fourth All-Union Conference on Automatic Control, 1968. The Theory of Automatic Control], Moscow, Nauka Press, 1972, pp 145-154, Discussion 256-262 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V277 by the authors).

Translation: This work studies the information characteristics of control processes of general form. The conclusion of information characteristics is based on thresholds of differentiability of states of an object of control at a given level of organization, introduced by the authors. The information conditions of basic modes of control and regulation are studied, including stabilization of the states of a control object, reproduction of required states and information conditions of invariance (absolute and with accuracy to ϵ). General equations are produced for the balance of enthalpy, corresponding to the basic modes of control. A general analogy is discovered between problems in statistical physics and information processes in control. Examples are presented of the design of control systems by the methods suggested. 12 Biblio. Refs.
1/1

USSR UDC 669.187.046.51

KLYUCHAREV, V. YE., URAZGIL'DEYEV, A. KH., AGEYEV, P. YA., and SOKOLEV, YU. V., Leningrad Polytechnica Institute

"Characteristics of the Behavior of Gases in the Crystallization of Ingots of Kh18N9-Type Steel with Titanium"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 3, 1973, pp 43-46

Abstract: An experimental study was made of the change in concentration of hydrogen, nitrogen, and oxygen in the crystallization process of OKh16N10T steel ingots weighing 3.2 and 13.7 tons. The metal was smelted in a 40-ton basic electric arc furnace. The pouring was from above through an intermediate funnel. Samples of the metal were taken with the help of a closed quartz pipette from three levels on the central zone of the ingot during 1-2.5 hrs of crystallization. The behavior of H, N, and O during crystallization is discussed by reference to diagrams characterizing their concentration change. The results of the experiments indicate the possibility of eliminating nitrogen from steel by deoxidizing the metal with titanium. Three figures, two bibliographic references.

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USSR

AGEYEV, N. V., Protsessy proizvodstva titana i yego dvuokisi, Nauka, 1973, 222 pp

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AGEYEV, N. V., Protsessy proizvodstva titana i yego dvuokisi, Nauka, 1973, 222 pp

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AGEYEV, N. V., Protsessy proizvodstva titana i yego dvuokisi, Nauka, 1973, 222 pp

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USSR

AGEYEV, N. V., Protsessy proizvodstva titana i yego dvuokisi, Nauka, 1973, 222 pp

USSR

AGEYEV, N. V., Protsessy proizvodstva titana i yego dvuokisi, Nauka, 1973, 222 pp

Part I. Electrothermy of Titanium Concentrates and Obtaining Titanium Dioxide Pigment

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USSR UDC (669.295+546.824-31).002.2

AGEYEV, N. V., Academician (Editor)

"Titanium and Titanium Dioxide Production Processes"

Moscow, Protsessy proizvodstva titana i yego dvuokisi (cf. English above), Nauka, 1973, 222 pp (from Protsessy proizvodstva titana i yego dvukisi, Nauka, 1973, pp 2, 213-215)

Translation of Annotation: This collection contains studies of the most important problems of the metallurgy of titanium based on research performed in recent years. One section deals with the metallurgical evaluation of titanium ores from a number of deposits and electromelting of concentrates to obtain titanium slags suitable for refining into titanium dioxide pigment. For the first time in Soviet literature, the results of the mastery of industrial ore-heating electric furnaces of the closed type are demonstrated. Other sections of the collection present articles on the chlorination of titanium-containing minerals, metallothermy, and the electrolysis of titanium.

This publication is designed for researchers and practical workers -- physical metallurgists and metallurgists -- and also for teachers and students at metallurgical institutions of higher learning and departments.

Contents

2/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111533

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CH SUB2:CHCL WAS PREPD. IN MAX. 85.5PERCENT YIELD BASED ON C SUB2 H SUB4 (80.6PERCENT ON CL) WHEN CHLORINATION OF C SUB2 H SUB4 WAS CARRIED OUT AT 450DEGREES WITH A [illegible] C SUB2 H SUB4-CL RATIO IN A JACKETED 146-6 MM STAINLESS STEEL TUBE CONTG. A FLUIDIZED BED OF 0.14-0.30 MM QUARTZ SAND INTO WHICH CL WAS INTRODUCED AT A HEIGHT OF 250 MM ABOVE THE C SUB2 H SUB2 INPUT. THE CONDENSATE CONTAINED, BESIDES 78.03PERCENT CH SUB2: CHCL, 0.98PERCENT ETCL, 0.75PERCENT CH SUB2:CCL SUB2, 1.88PERCENT CIS AND 0.94PERCENT TRANS-CLCL:CHCL, 016PERCENT MECHCL SUB2, 13.35PERCENT CICH SUB2 CH SUB2 CL, 0.38PERCENT MECCL SUB3, 0.45PERCENT CL SUB2 CHCH SUB2 CL, 1.70PERCENT CL SUB2 C:CHCL, 1.36PERCENT C SUB2 CL SUB4, 0.01PERCENT C SUB2 H SUB2, AND 0.01PERCENT CH SUB2:CHCH:CH SUB2.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--PREPARATION OF VINYL CHLORIDE BY THE DIRECT CHLORINATION OF ETHYLENE IN A FLUIDIZED CONTACT BED ON A PILOT PLANT APPARATUS -U-

AUTHOR-(05)-ALIYEV, V.S., MAMEDOV, M.A., GUSEYNOV, M.M., POPOVA, T.P., AGAYEV, M.T.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), [illegible]

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--VINYL CHLORIDE, ETHYLENE, FLUIDIZED BED, CHEMICAL PRODUCT PRODUCTION, CHLORINATED ORGANIC COMPOUND, CHLORINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0339 STEP NO--UR/0080/70/043/003/0[illegible]

CIRC ACCESSION NO--AP0111533

UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0122257

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN APP. WAS DEVELOPED FOR TESTING THE TAMPING COMPNS. USED IN SEALING THE GAP BETWEEN THE STANDPIPE OF A GAS WELL AND THE SIDES OF THE BORE HOLE. IT IS A BOMB IN WHICH THE TAMPING MATERIAL IS PACKED UNDER PRESSURE AROUND A CENTRAL CORE MADE OF COMPACTED SOIL TOPPED BY A METAL PIPE. A SYSTEM OF VENTS PERMITS TESTING OF THE PERMEABILITY OF SOIL TAMPERING MATERIAL SYSTEM AT THE TAMPING MATERIAL PIPE BOUNDARY UNDER 2-15 KG,CM PRIME2 AIR PRESSURE. THE BEST RESULTS WERE OBTAINED WHEN THE EXPANDING CEMENT TOPPED BY A RING SEAL OF THERMPOLASTIC RESIN TSKGS SU875-90DEGREES AROUND THE PIPE WAS USED. THIS COMPN. AFTER HARDENING FOR 15 DAYS BECAME IMPERMEABLE TO THE AIR AT 15 KG,CM PRIME2 PRESSURE.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--TIGHTNESS OF PLUGGING MATERIALS AND OF THEIR CONTACT WITH WELL CASING SURFACES -U-

AUTHOR-(05)-SEIDRZA, M.K., SHERSTNEV, N.M., AGAYEV, M.KH., MUGALINSKAYA, V.V., KHAIROV, KH.KH.

COUNTRY OF INFO--USSR

SOURCE--AZERB. NEFT. KHOZ. 1970, (2), 20-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, METHODS AND EQUIPMENT

TOPIC TAGS--PIPELINE TRANSPORTATION SYSTEM, TEST INSTRUMENTATION, NATURAL GAS, SEAL, THERMOPLASTIC MATERIAL, HARDNESS/(U)TSKGS THERMOPLASTIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/2028 STEP NO--UR/0487/70/000/002/0020/0023

CIRC ACCESSION NO--AP0122257

UNCLASSIFIED

USSR

AGAYEV, M. G., Leningrad, Vestnik Leningradskogo Universiteta, No 1, 1970, pp 121-127

of the degree of dark resistance can be used as a rapid, indirect method for establishing the photoperiodic nature of many species of herbaceous plants.

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USSR A UDC 581.1

AGAYEV, M. G.

"The Reaction of Plants to Prolonged Darkness. I. Formulation of the Problem and Methods of Studying It"

Leningrad, Vestnik Leningradskogo Universiteta, No 1, 1970, pp 121-127

Abstract: Despite the obvious close relationship between light and darkness in plant ecology and physiology, the role of light is accorded great importance while that of darkness tends to be underestimated. The importance of darkness is attested by the results of studies which revealed that the seeds of many species cannot germinate without it, and that short-day plants need it for generative development. On the other hand, darkness has an inhibitory effect on the generative development of long-day plants. Exposure to prolonged periods of darkness shows that plants differ markedly from one another in dark resistance, depending on the species and photoperiodic groups to which they belong. Study of dark resistance is of considerable interest because the phenomenon is a comparatively little known form of tolerance in the plant world. Determination
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USSR

UDC 548.7

AGAYEV, K. A., GASYMOV, V. A., CHIRAGOV, M. I., Institute of Inorganic and Physical Chemistry, Academy of Sciences Azerbaydzhan SSR

"Electronographic Determination of Structure of $InTlS_2$ Thin Films"

Moscow, Kristallografiya, Vol 18, No 2, Mar-Apr 73, pp 366-368.

Abstract: The method of electron diffraction is used to study the structure of thin $InTlS_2$ films. It is determined that they have a hexagonal lattice with unit cell periods: a = 3.81 ± 0.01, c = 14.91 ± 0.02 A. It is established that the Tl occupies positions 1(a) and 1(d), the In -- 2(i), the S -- 2(h) and 2(g) in rt. gr. $P\bar{6}m2$ with coordinates $z_{In} = 0.250$, $z_{S_1} = 0.167$, $z_{S_2} = 0.333$; the unreliability factor $R_{hkl} = 0.114$. The structure of $InTlS_2$ is similar to the structure of molybdenite MoS_2 with the difference that in the case of $InTlS_2$, the octahedrons between the trigonal prisms are filled with trivalent indium.

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USSR

AGAMOV, G. A.

"Some Results on the Solvability of Nonlinear [illegible]

Moscow, 1 sb. [illegible] bedding and their Applications -- collection of [illegible] 1970, pp 7-10 (from RZh-Matematika, No 7, [illegible])

Translation: An investigation is made [illegible] single-valued solvability of nonlinear [illegible] form $K_1K_2(u)/K_1(u)=h$ in a Banach space by [illegible] method. The general results which are [illegible] solvability of a class of nonlinear differential [illegible] contain derivatives of different orders of the [illegible] with respect to various coordinate axes. Author's [illegible].

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2/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REDN. OF 3,0 SUB2 NC SUB6 H SUB4 SO SUB2 CL WITH ZN IN HCL GAVE 20PERCENT 3,H SUB2 NC SUB6 H SUB4 SH (I). THE REACTIONS OF I WITH CLCH SUB2 CH SUB2 OH, ETBR, PRBR, ISO-PRBR, H SUB2C:CHCH SUB2 BR, MECL, PHCH SUB2 CL, H SUB2 C:CHNC, H SUB2 C:CMECO SUB2 ME, OR H SUB2 C:CMECO SUB2 BY GAVE 3,H SUB2 NC SUB6 H SUB4 SR (R IS CH SUB2 CH SUB2 OH, ET, PR, ISO-PR, H SUB2 C:CHCH SUB2, ME, PHCH SUB2, CH SUB2 CH SUB2 NC, CH SUB2 CHMECO SUB2 ME, OR CH SUB2 CHMECO SUB2 BU).

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS OF 3,AMINOTHIOPHENOL AND SOME OF ITS S DERIVATIVES -U-

AUTHOR-(02)-AGAYEV, A.N., KULIYEV, A.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 809-12

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, AMINE, PHENOL, THIOL, ZINC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1948 STEP NO--UR/0366/70/006/004/0804/0812

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